Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of operating a superconducting cable using a conductor cooled by a refrigerant to transmit electric power, characterized in that said refrigerant's temperature is changed in accordance with a transmission capacity of a superconducting cable ~~(110, 120, 130)~~.

2. (Currently Amended) The method of operating a superconducting cable according to claim 1, characterized in that when a power demand from a load connected with the superconducting cable ~~(110, 120, 130)~~ increases, the refrigerant temperature is reduced to increase the transmission capacity of the superconducting cable ~~(110, 120, 130)~~ to transmit electric power matching the power demand.

3. (Currently Amended) The method of operating a superconducting cable according to claim 1, characterized in that when a power demand from a load connected with the superconducting cable ~~(110, 120, 130)~~ decreases, the refrigerant temperature is increased to decrease the transmission capacity of the superconducting cable ~~(110, 120, 130)~~ to transmit electric power matching the power demand.

4. (Currently Amended) The method of operating a superconducting cable according to claim 1, characterized in that there are a plurality of superconducting cable circuits ~~(110, 120, 130)~~, and

when one of the circuits fails, the refrigerant temperature of an unfailed, good circuit is reduced below the temperature prior to the failure to increase the transmission capacity of the good circuit.

5. (Currently Amended) The method of operating a superconducting cable according to claim 4,

characterized in that each circuit includes a refrigerator ~~(211, 212, 213)~~ that cools the refrigerant for that circuit, and

both the refrigerator of the failed circuit and the refrigerator of the good circuit are used to cool the refrigerant of the good circuit to lower temperature than that prior to the failure.

6. (Currently Amended) The method of operating a superconducting cable according to claim 1, characterized in that a refrigerator ~~(211, 212, 213)~~ capable of cooling substantially down to the freezing point of the refrigerant is used to change the refrigerant temperature between the boiling point and the freezing point of that refrigerant.

7. (Currently Amended) The method of operating a superconducting cable according to claim 1, characterized in that a high freezing point refrigerant is replaced with a low freezing point refrigerant and a refrigerator ~~(211, 212, 213)~~ is used capable of cooling substantially down to or below the freezing point of the high freezing point refrigerant and the low freezing point refrigerant's temperature is changed between the boiling point and the freezing point of this refrigerant.

8. (Original) The method of operating a superconducting cable according to claim 1, characterized in that the refrigerant is one of liquid nitrogen, liquid air, liquid hydrogen, liquid neon, liquid helium, and liquid oxygen.

9. (Currently Amended) A superconducting cable system characterized by:

a superconducting cable ~~(110, 120, 130)~~;

a cooling mechanism ~~(211, 212, 213)~~ that cools a refrigerant for use with the superconducting cable ~~(110, 120, 130)~~;

a circulating mechanism ~~(221, 222, 223)~~ that circulates the refrigerant cooled by the cooling mechanism ~~(211, 212, 213)~~ to the superconducting cable ~~(110, 120, 130)~~; and

a refrigerant temperature control mechanism ~~(271, 272, 273, 281, 282, 283)~~ that regulates the refrigerant's temperature based on a power demand from a load connected to the superconducting cable ~~(110, 120, 130)~~.

10. (Currently Amended) A superconducting cable system characterized by:

a plurality of superconducting cables ~~(110, 120, 130)~~;

cooling mechanisms ~~(211, 212, 213)~~ that cool a refrigerant for use with the respective superconducting cables ~~(110, 120, 130)~~;

circulating mechanisms ~~(221, 222, 223)~~ that circulate the refrigerant cooled by the cooling mechanisms ~~(211, 212, 213)~~ to the superconducting cables ~~(110, 120, 130)~~; and

refrigerant route switching mechanisms ~~(231-233, 241-243, 251, 252, 261-263)~~ which, when one of the superconducting cables ~~(110, 120, 130)~~ becomes unavailable, block supply of the refrigerant to the unavailable superconducting cable and allow supply of the refrigerant to a remaining good superconducting cable.